The Sensitivity of Alaskan and Yukon Rivers, Fish, and Communities to Climate

Karen Cozzetto
Institute for Tribal Environmental Professionals
Northern Arizona University
Project Team

University of Colorado
Keith Musselman (lead), Mike Gooseff, Cassandra Brooks, Noah Moloch, Sabre Duren

USGS
Nicole Herman-Mercer, Josh Koch, Ryan Toohey, Mike Carey

University of Saskatchewan
Heidi Swanson

Yukon River Inter-Tribal Watershed Council
Edda Mutter

Institute for Tribal Environmental Professionals
Karen Cozzetto, Ann Marie Chischilly, Nikki Cooley

National Center for Atmospheric Research
Andy Newman, Joe Hamman, Tony Craig

University of Waterloo
Karl-Erich Lindenschmidt
Project background

NSF – Navigating the New Arctic Project

How will societally important fish habitat and river-ice transportation corridors along Arctic rivers be impacted by hydrologic response to climate change including permafrost degradation, transformed groundwater dynamics, shifts in streamflow, and altered river temperatures?
Methods and Outcomes

Indigenous Knowledges

Modeling

Integration

Monitoring

Indigenous Knowledges
Methods and Outcomes

Co-produced storylines of how climate change might affect fish, river ice, and communities

How can we increase our resilience to climate change both now and in the future?
Indigenous perspectives and project guidance

Native Advisory Council

Community input

- Regular community engagement webinars
- Email listserv with regular project updates
- Email to reach the project team and provide input and ideas
- Arctic Rivers Summit – Winter 2021/22
- Other outreach – we welcome your ideas!
Examples of project guidance with respect to modeling

**Climate:** What kinds of future scenarios would you like to consider? What kinds of output would be most helpful?

**Rivers:** What characteristics of river & riverine habitats are important for you &/or for fish? Which river ice corridors are critical for you?

**Fish:** What fish play key roles culturally, ecologically, or both that you might want us to model?

**People:** How is climate change affecting your subsistence, livelihoods, & cultures? How can we increase our resilience to climate change both now and in the future?
Please join us!

There are a variety of ways to be involved

We invite you to join our email listserv and webinar to learn more!

Please contact Karen at arcticrivers@Colorado.edu or 928-523-6758

Thank you!
Methods and outcomes

Monitoring

Indigenous Knowledges

Modeling
We welcome you to join our email listserv and webinar to learn more!

Email
arcticrivers@colorado.edu
to register or with any input and questions

Thank you!